NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET

(pursuant to NAC 445A.236)

Permittee Name: United States Air Force (USAF) 99th CES/CEV
4349 Duffer Drive Suite 1601
Nellis AFB, NV 89191-7007

Permit Number: NEV60030

Location: Creech Air Force Base
(formerly Indian Springs Air Force Auxiliary Field (ISAFAF))
Indian Springs, Clark County, Nevada 89018
Latitude: 36° 35′ 20″ N, Longitude: 115° 40′ 10″ W
Township 16S, Range 56E, Section 4

Wellhead Protection

The facility is within the 7000 foot buffer around six (6) public water supply wells. These wells are drilled to approximately 600 feet below ground surface (bgs), and are believed to be completed in deep confined zones. Discharge is downgradient of all public water supply wells. Discharge of treated effluent from the facility has not impacted these wells, and continued discharge is not expected to affect water quality.

General:

The Permittee operates a package wastewater treatment plant at the Creech Air Force Base, in northwestern Clark County, Nevada. The design rating of this plant is 110,000 gallons per day (GPD), and the layout consists of a bar screen, comminutor, extended aeration basin, clarifier and an Imhoff Tank for emergency influent storage during aeration basin maintenance and repair. The effluent meets secondary treatment standards and is discharged into two (2) evaporation/percolation trenches. Trenches are used for effluent discharge because percolation ponds could potentially attract migratory waterfowl in proximity to the aircraft runways. Settled sludge from the aeration basin/clarifier is periodically wasted to two (2) sludge drying beds. The plant receives domestic wastewater influent from USAF personnel and a smaller percentage of influent flow from on-site commercial/light industrial operations including vehicle servicing and repair activities at the fire station and vehicle/equipment maintenance shops. The Permittee maintains an industrial pretreatment program including the use of oil/water separators to minimize the discharge of oil, grease, and other petroleum-based contaminants into the treatment plant.

The US Air Force intends to open negotiations with Clark County to connect to the Indian Springs community wastewater treatment facility. It is anticipated that this process will take 2 to 3 years, and so the Permittee has requested renewal of the current permit.

Receiving Water Characteristics:

Secondary treated effluent is discharged to groundwaters of the State of Nevada via percolation in two (2) trenches. Groundwater beneath the trenches is found at a depth of 43.6 feet and flows in a northerly direction, parallel to the trenches. Quarterly testing of the upgradient groundwater monitoring well shows the following concentrations: chlorides ≤ 33 mg/L, total dissolved solids (TDS) ≤ 352 mg/L and nitrate as nitrogen ≤ 1.4 mg/L. The Permittee is required to perform quarterly sampling in one (1) upgradient and two (2) downgradient monitoring wells.

Effluent Flow and Characteristics:
The Permittee has applied for 30-day average and daily maximum flows of 90,000 GPD and 110,000 GPD, respectively. The flow varies greatly depending on the base population, as the base is used for intermittent training of personnel. During the period from July, 2002 through December, 2005, the average of the daily maximum influent flows is approximately 87,900 GPD. The highest daily maximum flow during that period was reported as 190,000 GPD.

Because activities at the base include light industrial operations, Creech AFB maintains an industrial pretreatment program. To monitor the effectiveness of the program, NDEP requires that effluent be monitored quarterly for total petroleum hydrocarbons (TPH), annually for benzene, toluene, ethyl-benzene, and xylenes (BTEX), and annually for Priority Pollutant metals (Antimony, Arsenic, Beryllium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc). During the period from July, 2002 through December, 2005, all TPH and BTEX analyses were below detection limits. Priority Pollutant metal analyses were all below detection limits, with the exception of the following:

Year	Copper (mg/l)	Thallium (mg/l)	Zinc (mg/l)	Mercury (mg/l)
2002	ND	0.38	0.057	ND
2003	0.0188	ND	0.155	ND
2004	ND	ND	ND	0.0023
2005	ND	ND	0.062	ND

Proposed Effluent Limitations and Special Conditions:
Plant influent, effluent, and upgradient and downgradient monitoring wells shall be monitored and limited according to the following Tables.

Table 1 – Plant Discharge Limitations

PARAMETER		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		30 - Day Average	Daily Maximum	Measurement Frequency	Sample Type
Influent	Inhibited BOD_5 (mg/l)	Monitor & Report		Monthly	Discrete
	Total Suspended Solids (mg/l)	Monitor & Report		Monthly	Discrete
	Flow (MGD)	0.09	0.110	Continuous	Recorder
Effluent	Inhibited BOD_5 (mg/l)	25	35	Monthly	Composite
	Total Suspended Solids (mg/l)	30	45	Monthly	Composite
	pH (Standard Units)	6.0 to 9.0		Monthly	Discrete
	Total Petroleum Hydrocarbons (mg/l)	---	1.0	Quarterly	Discrete
	Benzene (mg/l)	---	0.005	4th Quarter (2)	Discrete
	Ethylbenzene (mg/l)	---	0.1	4th Quarter (2)	Discrete
	Toluene (mg/l)	---	0.1	4th Quarter (2)	Discrete
	Total Xylenes (mg/l)	---	0.2	4th Quarter (2)	Discrete
	Priority Pollutant Metals Scan (1)	---	Monitor & Report-	4th Quarter (2)	Discrete

	Trench Staff Gauge (inches)	Monitor & Report-	Monthly	Discrete Measure

(1) The priority pollutant metals are defined as follows: Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl and Zn.
(2) All 4th quarter sampling results for benzene, ethylbenzene, toluene, xylene, and the metals scan shall be submitted as part of the 4th quarter DMR submittal.

Table 2 – Groundwater Monitoring(1)

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Quarterly Average	Daily Maximum	Measurement Frequency	Sample Type
TDS (mg/l)	Monitor & Report		Quarterly	Discrete
Chlorides (mg/l)	Monitor & Report		Quarterly	Discrete
Total Nitrogen (mg/l)	10.0		Quarterly	Discrete
Nitrate as N (mg/l)	Monitor & Report		Quarterly	Discrete
Depth to Groundwater (ft)	Monitor & Report		Quarterly	Measurement
Groundwater Elevation (ft)	Monitor & Report		Quarterly	Measurement

(1) On a quarterly basis, the Permittee shall monitor and report the above parameters in one (1) upgradient well (MW-100) and two (2) downgradient wells (MW-102 & MW-103).

Schedule of Compliance:

a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.

b. The Permittee shall submit, with the first Discharge Monitoring Report after issuance of this permit, a map of the facility and trench location, with location of monitor wells clearly designated and labeled.

c. **By January 1, 2007**, the Permittee shall submit to the Division for review and approval all updates to the O&M Manual for the treatment and disposal facility. The updates shall include a section on groundwater monitoring and sampling procedures.

d. **By January 1, 2007,** the Permittee shall submit to the Division for review and approval a revised industrial pretreatment program manual (documentation). This industrial pretreatment manual shall include a discussion of the industrial service connections to the Creech AFB treatment facility, potential industrial wastewater contaminants from these service connections, and work practices and control devices implemented to minimize the discharge of industrial contaminants from these service connections to the wastewater treatment facility.

Rationale for Permit Requirements:

The monitoring proposed by this permit is consistent with existing permit limitations and secondary treatment requirements. Creech AFB repairs, refuels, and rebuilds engines and vehicles at various maintenance/equipment shops connected to the sewer. For this reason, the Division requires periodic monitoring of petroleum fuel and lubricant constituents indicated above in Table 1. The Division requires an annual metals scan for the thirteen (13) priority pollutant metals because the

maintenance and repair shops perform metalworking activities such as welding, cutting, and parts cleaning.

Procedures for Public Comment:
The Notice of the Division's intent to reissue (renew) a permit authorizing the facility to discharge secondary treated effluent to groundwaters of the state subject to the conditions contained within the permit is being sent to the **Las Vegas Review-Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of the public notice. The comment period can be extended at the discretion of the Administrator. The deadline date at NDEP for receipt of all comments pertaining to this public notice period is **August 14, 2006, at 5:00 P.M.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination
The Division has made the tentative determination to reissue (renew) the proposed permit for a period of five (5) years.

Prepared by: Janine Hartley
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